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10/031,872	01/24/2002	Josep Fontdecaba Buj	Q68112	8688

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EXAMINER	
ENGLISH, PETER C	
ART UNIT	**PAPER NUMBER**
3616	

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/031,872	FONTDECABA BUJ, JOSEP	
	Examiner	Art Unit	
	Peter C. English	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-33* is/are pending in the application.

4a) Of the above claim(s) *20 and 33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19 and 21-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 20 and 33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the election requirement in Paper No. 7.

Drawings

2. The proposed drawing correction filed on 29 January 2004 has been disapproved because:

In Fig. 17, applicant has failed to change 23B and 23C to 23.

In Figs. 17 and 19, applicant has failed to change each occurrence of 26A and 26B to 26A' and 26B', respectively. Further, reference numbers 26A' and 26B' do not appear in the substitute specification.

Reference character M has been added to Figs. 21, 23 and 24, but this character does not appear in the substitute specification.

Reference character P has been added to Fig. 21, but this character does not appear in the substitute specification.

Fig. 21 still contains reference number 48, which does not appear in the substitute specification.

New Fig. 28 contains reference numbers 42', 52', 53', 56', 67', 58', 59', 67', 73, 74, 75 and 76, but these numbers do not appear in the substitute specification.

3. Proposed new Figs. 28 and 29 filed on 29 January 2004 have been disapproved because they contain new matter. Specifically, the original disclosure does not support the showing of two pressurized fluid devices 62', 62', or an element M interconnecting the two devices 62', 62'.

Since the proposed new figures have been disapproved, the substitute specification should not refer to these figures. See paragraphs 30, 58 and 61.

4. The original drawings are objected to because:

In Figs. 11-13, reference numbers 26A, 26B are used for 2 segments of the same transmission element. However, in Figs. 17-20, these reference numbers are used for two different transmission elements.

In Fig. 20, "the lower occurrence of "23D" should be "24D".

Reference number 43 is used for three separate and distinct embodiments of the hydraulic cylinder. The first is shown in Fig. 21, the second in Figs. 22-24 and the third in Fig. 25.

In Fig. 21, the left-hand occurrence of "49" should be "50".

In Fig. 22, each occurrence of "67" should be "68". See Fig. 26.

5. The original drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include reference number 67 directed to two-way regulation devices in Fig. 22. See paragraph 60 of the substitute specification, at line 1.

6. The original drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

36, shown in Fig. 14.

23A-23D, shown in Figs. 17, 18 and 20.

48, shown in Fig. 21.

7. The original drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or canceled from the claims: pneumatic circuits with pneumatic conduits (claim 21, lines 2-4); two central devices connected through a conduit (claim 22, lines 3-5); means for filling and draining the central devices (claim 29); each of the conduits having two portions shunt connected to each other for allowing fluid to flow from one conduit portion to the other (claim 31); and shunt connections including a pneumatic element (claim 31). No new matter should be entered.

8. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

9. The substitute specification filed on 29 January 2004 has been entered. The substitute specification is objected to because:

The abstract and paragraphs 1, 13, 15, 17, 23 and 28 describe the invention as having four "sets" of wheels. This is inaccurate. These paragraphs should be amended to describe "four wheels" or one "set" of four wheels.

In paragraph 46, at line 2, "26" should be "26A, 26B".

In paragraph 53, at line 6, "49" should be "50", and "50" should be "49". Note that compartment 49 is annular, not cylindrical.

In paragraph 56, at line 1, "43" should be "43'".

In paragraph 60, at line 7, "electro" should be "electric" since "electro-" is a prefix, not a separate word.

In paragraph 61, at line 7, "springs 71" should be "spring 72".

Appropriate correction is required.

Claim Objections

10. Claims 19 and 21-32 are objected to because of the following informalities:

In claim 19, at line 5, "element" should be "elements".

In claim 19, at line 8, "determined" should be "caused".

In claims 23 and 24, at line 5, "side" should be inserted after "concentric".

In claim 27, at line 3, "electro" should be "electric" since "electro-" is a prefix, not a separate word.

In claim 30, at line 2, "of" should be "within".

In claim 31, at line 4, "portions" should be "portion".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

11. Claims 21-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification fails to describe the manner in which the hydraulic circuit shown in the drawings would have to be modified in order to utilize a pneumatic circuit with pneumatic conduits (claim 21, lines 2-4).

The specification fails to provide a description of the structure of a central actuating element having a pair of devices connected by a conduit (claim 22, lines 3-5). How would the element shown in Figs. 21-24 have to be modified in order to provide this structure?

Claim 22 contains new matter because the original disclosure does not describe a pair of central devices of a first central actuating element connected by a conduit, and another pair of central devices of a second central actuating element connected by another conduit.

Claims 28 and 31 contain new matter because the original disclosure does not describe the device shown in Fig. 27 as connecting two portions of a single conduit. According to paragraph 61 of the substitute specification, the device shown in Fig. 27 connects two different conduits on the same side of the vehicle.

The specification fails to describe the element(s) used to fill and drain the central cavity (claim 29). Further, claim 29 contains new matter because the original disclosure does not describe an element(s) for filling and draining the pair of "central devices".

The specification fails to describe how the device shown in Fig. 27 must be modified in order to utilize a "pneumatic element" (claim 31). Further, the specification fails to define the "shunt" connection referred to in claim 31.

12. Claims 19 and 21-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, at lines 1-2, "four sets of at least one wheel" is both indefinite (i.e., how can a set have one wheel?) and inaccurate (i.e., the vehicle has one set of four wheels).

In claim 19, at line 21, "analogous to" is so broad that it is unclear what relationship is defined by this phrase.

In claim 19, at line 21, "to which the associated...wheel is subjected" is inaccurate because the "other wheel actuating element" recited at line 20 is not "associated" with the wheel that is subjected to the vertical force; instead it is diagonally opposed to this wheel (see lines 17-19).

In claim 21, at lines 2-3, "the wheel actuating elements include hydraulic or pneumatic circuits" is inaccurate because the wheel actuating elements are only one component of the hydraulic circuit.

In claim 21, at line 6, "central resilient element is a pneumatic cavity" is inaccurate because the cavity 56 contains hydraulic fluid that is pressurized by device 62.

In claims 23 and 24, at lines 5-6, "form three cavities, a central cavity and two side cavities" is indefinite because it is unclear whether the central and side cavities are the three cavities, or are in addition to the three cavities.

In claim 23, at line 7, "wherein the conduits...are connected to the three cavities" is inaccurate since the conduits are not connected to the central cavity 56 and the end cavities 59, 60, but instead are connected to the intermediate cavities 57, 58 and the end cavities 59, 60 (i.e., they are connected to four cavities, which cavities do not including the central cavity).

In claim 24, at line 7, "wherein the conduits...are connected to the cavities" is inaccurate since the conduits are not connected to the central cavity 56 and the end cavities 59, 60, but instead are connected to the intermediate cavities 57, 58 and the end cavities 59, 60 (i.e., they are connected to four cavities, which cavities do not including the central cavity).

Claims 28 and 31 are inaccurate because they state that the device shown in Fig. 27 connects two portions of a single conduit. According to paragraph 61 of the substitute specification, the device shown in Fig. 27 connects two different conduits on the same side of the vehicle.

In claim 28, at lines 2-3, "limit a volume flow between the conduit portions" is inaccurate since the device shown in Fig. 27 is divided by the piston 70 and, therefore, does not allow fluid to flow in one end and out the other.

In claim 31, at lines 3-4, "allows fluid to flow from one of the conduit portions to the other conduit portions" is inaccurate since the device shown in Fig. 27 is divided by the piston 70 and, therefore, does not allow fluid to flow in one end and out the other.

13. In order to address the above rejections of claims 19 and 21-24 under 35 USC 112, the examiner suggests the following amendments:

In claim 19, at lines 1-2 and 8, change "sets of at least one wheel" to "wheels".

In claim 19, at lines 9, 18, 19, 21 and 22, delete "seat of at least one".

In claim 19, at lines 20-21, change "vertical force, which is...subjected, to" to "corresponding vertical force to".

In claim 21, at lines 1-2, change "hydraulic or...rams" to "single effect fluid rams".

In claim 21, at line 4, change "hydraulic or pneumatic" to "fluid".

In claim 21, at line 6, change "pneumatic" to "fluid".

In claim 22, at lines 4 and 5, delete "through a central conduit or built".

In claims 23 and 24, replace lines 5-6 with "the pistons define a plurality of cavities within the central cylinder and two concentric side cylinders, the cavities including a central cavity and two side cavities;".

In claim 23, at line 7, delete "three".

Further amendments are required to address the rejections of claims 28, 29 and 31 under 35 USC 112.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 19, 21, 22, 25, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring et al. '076 (WO 95/23076) in view of Sakai (US 5,486,018). In the

embodiment of Fig. 8, Heyring et al. '076 discloses an anti-roll and anti-pitch suspension system comprising: a central resilient element 20 coupled to a pair of central actuating elements 13a, 13b; single effect hydraulic rams 1-4 extending vertically between the four vehicle wheels and the vehicle body; hydropneumatic chambers 5-8 coupled to the hydraulic rams 1-4; conduits 9-12 connecting the rams 1-4 to respective central actuating elements 13a, 13b; and variable flow restricting valves 9b-12b located within the conduits 9-12. In the embodiment of Fig. 5, the central resilient element comprises a central cavity 21a charged with pressurized gas through valve 22a, and the central actuating elements comprise a pair of double pistons 18b-18d and 19b-19d located within a central cylinder 21. The pistons 18b-18d and 19b-19d divide the cylinder 21 into cavities 21a-21c and 14-17. The central cavity 21a is larger than the end cavities 14-17. The conduits 9a-12a are connected to respective end cavities 14-17. In the embodiment of Fig. 10, the central cavity 35 connected to a pneumatic expansion chamber 38 by an electric valve 42. Heyring et al. '076 further discloses that rubber blocks, coil springs and fluid springs can be used interchangeably for the central resilient element (see page 14, lines 19-20).

In Heyring et al. '076 the diagonally opposed rams 1, 3 and 2, 4 are connected to different ones of the central actuating elements 13a, 13b (see Fig. 8). Therefore, Heyring et al. '076 lacks diagonally opposed rams connected to the same central actuating element. In the embodiment of Fig. 10, Sakai teaches diagonally opposed rams 102 connected to the same central actuating element 116. Sakai teaches that this arrangement "is effective for restraining pitching and rolling and also restrains vehicle body movement from a combination of pitching and rolling" (see column 11, lines 10-18). From this teaching of Sakai, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Heyring et al. '076 by connecting diagonally opposed rams to the same central actuating element because this arrangement is effective for restraining pitching and rolling and also restrains vehicle body movement from a combination of pitching and rolling.

16. Claims 23, 24, 27, 28 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyring et al. '076 in view of Sakai as applied to claims 21 and 22 above, and further in view of Weiss (US 6,267,387). The Heyring et al. '076 and Sakai combination lacks inner pistons which are larger than the outer pistons. In the embodiment of Fig. 9, Weiss

teaches a flow distributor including an inner piston 48 which is larger than outer pistons 46, 47. From this teaching of Weiss, it would have been obvious to further modify Heyring et al. '076 by making the inner pistons (in the Fig. 5 embodiment) larger than the outer pistons in order to tailor performance to a particular application (e.g., a sports car requiring a stiffer suspension). Further, such a modification involving a mere change in size is generally considered to be within the level of ordinary skill in the art.

Response to Arguments

17. Applicant's arguments with respect to claims 19 and 21-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 703-308-1377. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 703-308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter C. English
Primary Examiner
Art Unit 3616

3/24/04

pe
24 March 2004